

AR/ARD Series — Convertible Contact Industrial Control

Product Selection

When Ordering Specify

- Catalog Number of Basic Relay with 120/60, 110/50 AC coil from AR/ARD Relays table.

- If a coil voltage other than listed is required, select the Suffix Code from the Coil Voltage table below and substitute it for the last letter in the Catalog Number. Example: AR64V for a 110/60 AC coil.

Table 49-92. AR/ARD Relays

Number of Pole Spaces	Contacts			AR 600V AC Relays 120/60, 110/50 AC Coil		ARD 600V DC Relays 120 DC Coil	
	NO	NC	Blank Cavities	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
4	0	0	4	AR4A	59.00	ARD4S	131.00
	2	0	2	AR420A	88.00	ARD420S	160.00
	4	0	0	AR440A	118.00	ARD440S	189.00
6	0	0	6	AR6A	59.00	ARD6S	131.00
	4	0	2	AR640A	118.00	—	—
	6	0	0	AR660A	147.00	ARD660S	218.00
8 ^①	6	0	2	AR860A	147.00	ARD860S	②
	8	0	0	AR880A	176.00	ARD880S	247.00
10 ^①	10	0	0	AR10100A	224.00	ARD10100S	276.00

① Will not accept top-mounted latch or timers.

② Contact Customer Support Center for availability.

Table 49-93. Coil Voltage Table

AR Coils			ARD Coils	
Volts AC	Hz	Suffix Code	Volts DC	Suffix Code
12	60	F	12	D
24	60	I	24	L
48	60	G	48	M
110	60	V	95	B
110/120	50/60	A	120	S
208	60	B	130	U
220/240	50/60	W	240	T
277	60	C		
380/440	50/60	H		
440/480	50/60	X		
550	60	D		
550/600	50/60	E		

49

Table 49-94. Contact Cartridges — 600V

Type Terminal	Standard Contact Cartridge		Overlap Contact Cartridge	
	Catalog Number ^③	Price U.S. \$	Catalog Number ^④	Price U.S. \$
AC Cartridges With Clamp Terminals With Screw Terminals	ARC	14.70	AR0C	29.25
	ARCR	14.70	AR0CR	29.25
DC Cartridges With Clamp Terminals With Screw Terminals	ARDC	14.70	ARD0C	29.25
	ARDCR	14.70	ARD0CR	29.25

③ Standard cartridges are sold in cartons of four cartridges. Catalog Number is for single cartridge.

④ Overlap contact cartridges are sold in sets of two cartridges. Catalog Number is for sets of two.

AR/ARD Series — Convertible Contact Industrial Control



AR 4-Pole

AR 6-Pole

Product Description

The AR/ARD relays are electromechanical convertible contact relays. AR relays are AC devices and the ARD is for DC applications.

Application Description

Type AR and ARD relays are designed for use on machine tools, process lines, conveyors and similar automatic and semi-automatic equipment.

Operation

AR relays are available in either 4- or 6-pole configurations. AR relays are easily converted to 8 or 10 poles simply by adding a 4-pole deck. In addition, mechanical latch and pneumatic or solid-state timer attachments are available with 4- and 6-pole relays.

Contacts are convertible from NO to NC, to provide any combination desired up to a maximum of 10. For the ARD, the number of poles cannot exceed **four** NC in any pole configuration. Wide spacing of contacts simplifies installation, contact testing and maintenance. Contacts are electrically and mechanically isolated from each other. Overlap contacts are also available in one or two sets. These contacts should be mounted in the center pole positions. AC and DC contact cartridges should not be used in the same relay.

Standards and Certifications

- UL File No. E19223
- CSA File No. LR39402-6, LR54517 and LR54520

Technical Data

Table 49-83. Specifications

Contact Ratings — 600V AC Cartridge NEMA A600					
Volts	Maximum Current			Maximum VA	
	Cont.	Make	Break	Make	Break
120	10	60	6	7200	720
240	10	30	3	7200	720
480	10	15	1.5	7200	720
600	10	12	1.2	7200	720

DC Cartridges NEMA P600

Volts	Maximum Current		Maximum VA Make or Break
	Cont.	Make or Break	
125	5	1.10	138
250	5	0.55	138
600	5	0.20	138

Resistive Rating	Coil Power Requirements
125V DC: 3A 250V DC: 1.5A	AC: 96 VA open, 14 VA closed DC: 14 watts open, 250V max.

Options

Table 49-84. Options

Description	Suffix Code	Adder U.S. \$
Convertible Contacts AR and ARD relays listed are supplied with NO contacts which are easily converted to NC. If both NO and NC poles are required, order by Catalog Number. Example: 4-pole relay with 1NO and 3NC contacts, order AR413A.		①
Screw Terminals For ring-type connectors, add Suffix R to the Catalog Number. Example: AR420AR.	R	N/C
Overlapping Contacts NO contact closes before corresponding NC contact opens — supplied as NO/NC sets of two cartridges. Insert letter S after relay type designation in listed Catalog Number. Example: AR402AS. Specify the number of sets required: S for one set and S2 for two sets.	S or S2	①

① Consult Customer Support Center for availability.

Accessories

Four-Pole Top Deck Adder

- Increases contact capacity from four/six poles to eight/ten poles.
- Mounts on top of basic relay using three screws.
- Will not interfere with wiring, testing or convertible cartridges.
- Screw terminals for ring connectors available; to order add suffix **R** to Catalog Number listed below.



Four-Pole Top Deck Adder

Table 49-85. Four-Pole Top Deck Adder

No. of Pole Spaces	Contacts			Catalog Number	Price U.S. \$
	NO	NC	Blank Cavities		
4	2	0	2	ARA20	29.25
	4	0	0	ARA40	59.00
With 600V DC Cartridges					
4	2	0	2	ARDA20	29.25
	4	0	0	ARDA40	59.00

Pneumatic Timer

- Includes 1NO and 1NC non-convertible timed contacts.
- Mounts on basic four- or six-pole AR relay. Not for use on DC.
- Field convertible between ON delay and OFF delay.
- Repeatability accuracy: ±15%



ARPT Pneumatic Timer for AR Relays

Table 49-86. Pneumatic Timer

Timing Range Seconds	Catalog Number	Price U.S. \$
0.2 – 20	ARPT-20	324.00
4.0 – 60	ARPT-60	324.00
20.0 – 200	ARPT-200	298.00

Contact Ratings — NEMA A600

AC Volts	Nominal Load Break Amps	Inrush and Interrupting Capacity Amps
120	6.0	60
240	3.0	30
480	1.5	15
600	1.2	12

Discount Symbol 1CD1

Dimensions and Enclosures

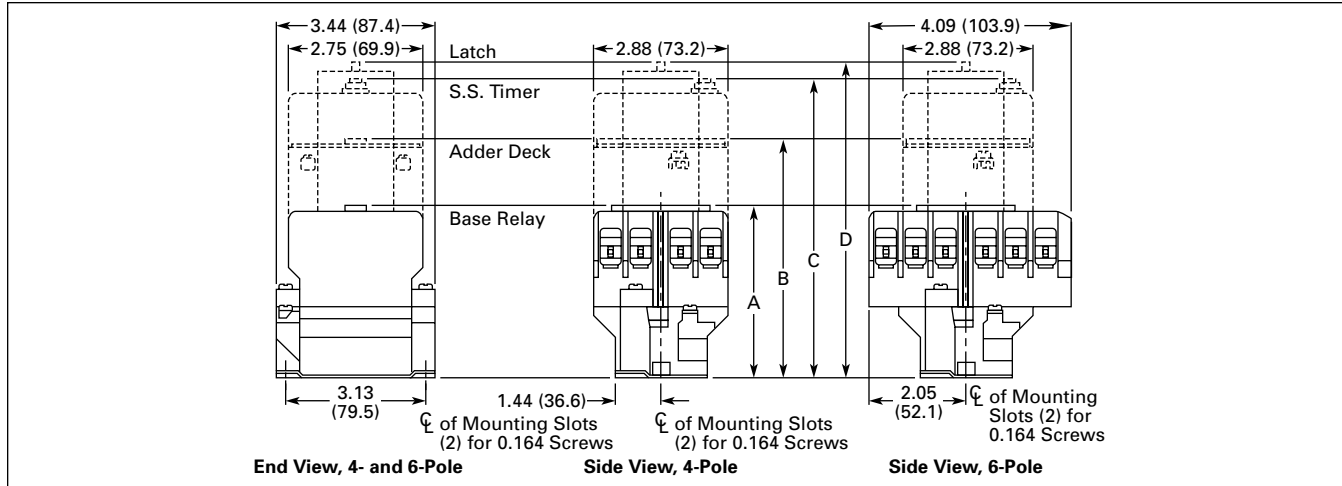


Figure 49-67. 4- and 6-Pole with 4-Pole Adder, Solid-State Timer and Mechanical Latch — Approximate Dimensions in Inches (mm)

Table 49-90. 4- and 6-Pole with 4-Pole Adder, Solid-State Timer and Mechanical Latch

Relay Catalog Number	Approximate Dimensions in Inches (mm)			
	A 4-, 6-Pole Relays	B Relay Adder	C Relay with Timer	D Relay with Latch
AR	3.56 (90.4)	4.94 (125.5)	6.00 (152.4)	6.39 (162.3)
ARD	4.63 (117.6)	6.00 (152.4)	7.06 (179.3)	7.45 (189.2)

Table 49-91. Enclosures — NEMA 1 for BF, BFD, AR, ARD

Catalog Number	Poles	Dimension A in Inches (mm) NEMA 1
Relays without Attachments		
BF, AR, ARD	All	5.34 (135.6)
BFD	4 – 8	5.34 (135.6)
BFD	10, 12	7.97 (202.4)
Relays with Attachments		
BF, AR, ARD	All	7.97 (202.4)

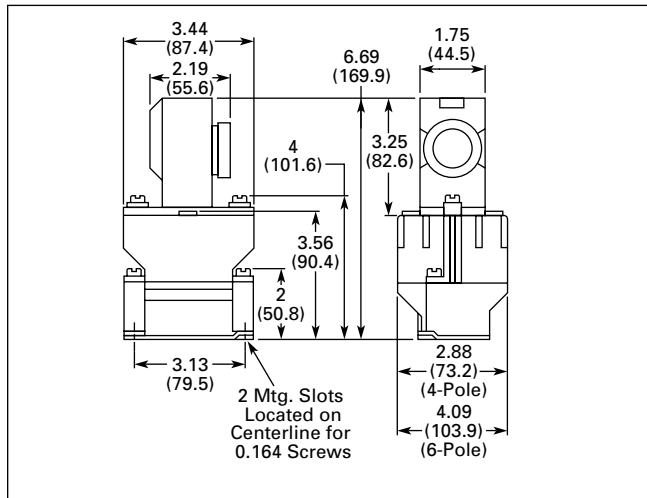


Figure 49-68. APRT Timer — Approximate Dimensions in Inches (mm)

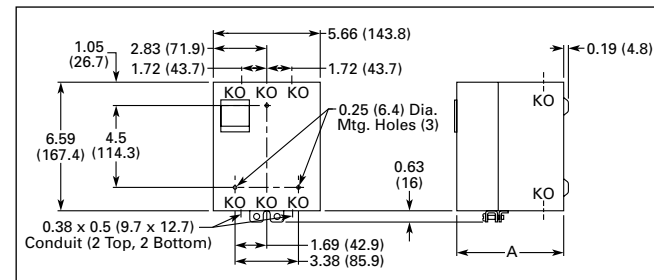


Figure 49-69. Enclosures — NEMA 1 for BF, BFD, AR and DFRD — Approximate Dimensions in Inches (mm)